UTS 700 Universal Terminal System

The SPERRY UNIVAC® UTS 700 is a low-cost yet powerful intelligent terminal system that can be used as either a stand-alone batch or remote batch terminal. Its hardware, software and peripheral capabilities are built around a microprocessor computer using the latest advances in large-scale integrated-circuit and MOS technology. The sophisticated disk operating system of the UTS 700 is of a type usually found only on much larger data processing systems.

Directly addressable memory in the UTS 700 ranges from 48K bytes to 65K bytes of storage, available in a 16K increment. The processor of the UTS 700 is an 8-bit parallel binary processor with all the needed accumulators, registers and flags to control the flow of data to and from memory. A priority interrupt facility allows the processor to respond to both internal and external events.

The UTS 700 can operate as either a stand-alone batch system or remote-batch terminal. As a batch system the UTS 700 offers many features unusual in its price and size class, such as concurrent remote batch terminal and batch operation, disk file management with files called by name, an easy English-language control command and error-logging capability.

A powerful language processor is available on the UTS 700: industry-standard RPG II. And a complete set of powerful and flexible utility programs is supplied with the system to allow sorting, copying and manipulation of data.

Physically, the UTS 700 features a desk-type configuration housing the powerful microprocessor, an easy-to-use operator control console, the memory, a communications adaptor and an interface for up to four peripherals. To this is added either a disk or diskette system for resident software and user programs and files.

A wide choice of peripherals makes the UTS 700 particularly versatile and complete: diskettes, cartridge disks, printers, card readers, a card punch and workstation CRT displays extend the capabilities of the system to meet all application needs.

SPERRY UNIVAC

CRT Workstation

The CRT workstation for the UTS 700 consists of a 12-inch cathode-ray-tube screen, keyboard, microprocessor and memory.

The workstation displays up to 1920 characters out of its own storage or buffer on 24 lines of 80 characters each. Characters displayed include numbers, upper- and lower-case letters, punctuation and special characters.

The keyboard is in the standard typewriter configuration familiar to most people. A 10-key numeric keypad is also included. Other special keys are used for cursor control, screen erase and communication with the processor.

The CRT workstation has many built-in features to speed input and keep errors to a minimum. Foremost is the protected-field feature, which lets the operator enter data only in those fields which are designated by the controlling programs. The workstation positions the cursor on the field to be entered, and upon entry verifies and edits each field to be entered, giving the operator immediate validity checking.

Single- and Dual-Density Diskettes

The UTS 700 offers single- and dual-density diskette subsystems ranging up to 1 million bytes of storage.

The diskette is a small, cost effective, on line storage system. The medium is a small, flexible mylar diskette about the size of a 45 RPM phonograph record.

Two versions of the diskette are available—a single- and dual-density. The single density is industry compatible and has a capacity of 250K bytes; the dual density contains a nominal 500K bytes of information.

Up to 3 dual diskettes can be housed in the processor desk.

The basic configuration of the UTS 700 must include one dual diskette in dual-density mode, or a cartridge disk.

Cartridge Disks

SPERRY UNIVAC cartridge disks provide higher capacity disk storage and higher speed than the diskette subsystem. The cartridge disks are available in two versions: a 5-MB single-density (2.5 MB fixed and 2.5 MB removable) or a 10-MB double-track density (5 MB fixed and 5 MB removable). Recording is on four surfaces in each unit, two on the fixed disk and two on the removable disk.

High speed is a cartridge disk feature. Rotation of the disks is 2400 rpm and average latency is 12.5 ms. Average arm movement is 50 ms. Transfer rate is 267 KB/second.

UNISERVO 10 Tape Subsystem

The UNISERVO 10 tape subsystem may be attached to the UTS 700 universal terminal system for reading and writing 9-track non-return-to-zero or phase-encoded tape. The unit operates at 25 ips for a transfer rate of 20 KB phase-encoded and 40 KB non-return-to-zero tape. The recording density is 1600 bpi phase-encoded and 800 bpi non-return-to-zero. Rewind speed is 200 ips.

300-lpm Printer

The SPERRY UNIVAC 300-lpm printer, using a comb matrix method, produces multiple copies of data at rates up to 300 lines per minute. It also accepts data from the host, the tape subsystem or diskette/disk subsystems. The printer produces the full upper- and lower-case ASCII character set in clear, easily readable images. With 132 printer positions, the printer gives you 10 characters per inch horizontal spacing and 6 or 8 lines per inch vertically.

600-lpm Printer

The 600-lpm printer, using an impact method, prints at a rate of up to 600 lines per minute. It can print up to six copies on continuous, sprocketed forms which may be as narrow as 3⅝ inches or as wide as 18¾ inches. Prints up to 64 or 96 characters.

Model 800 Terminal Printer

The SPERRY UNIVAC Model 800 terminal printer is a compact, high-speed, exceptionally quiet device capable of printing 300 characters per second. Its printing speed is 100 full 80-column lines per minute from a 96-character upper- and lower-case font. The Model 800 terminal printer uses a non-impact printing method to produce a single copy of all the data or text from the CRT workstation. It fits easily onto a desk top.

Card Reader

The SPERRY UNIVAC card reader is a table-top, 80-column card reader available in both a 300-card-per-minute and a 600-card-per-minute version.

Cards are read on a column-by-column basis. They are subject to a standard read check, insuring correct data input. The card reader has an input hopper and an output stacker, each with a 1000-card capacity. It is designed to allow continuous operation by a single operator.

Card Punch

The card punch subsystem operates at a speed of 75 cards per minute when punching a full 80 columns—and 160 cards per minute when punching is confined to the first 28 columns. Punching is performed two columns at a time, and sensors are used to provide punch checks.

The input hopper of the card punch has a capacity of 700 cards. Primary and secondary stackers have capacities of 700 and 100 cards, respectively.

SPECIFICATIONS

Processor

Word Size—8 bits

Directly Addressable Memory—65K

Accumulators/Registers—
8 bit accumulator
6-8 bits work/index registers
16 bit program counter
16 bit stacker counter

Timing—
Basic time state is 500 nanoseconds

Minimum instruction—1 machine cycle of 4 time states

Instruction times—1 to 5 machine cycles (2 to 10 microseconds)

Interrupts—8 line automatic priority interrupt facility

Internal Code—8 bit ASCII

Workstation CRT

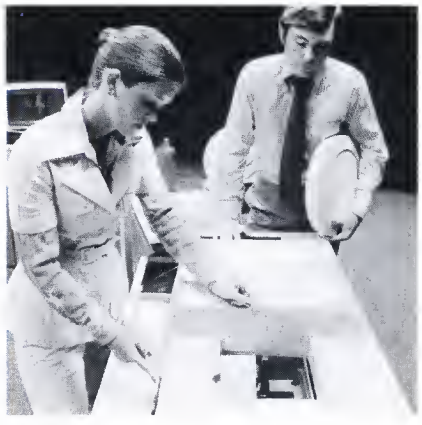
Format—24 lines by 80 characters

Character generation—7 X 9 dot matrix

Screen—green phosphor

Keyboard—typewriter layout

10 key numeric pad



All specifications subject to change without notice.

SPERRY UNIVAC Disk and Diskette Unit Characteristics

		Dual Density Diskette	Single Density Diskette	Single Density Cartridge	Dual Density Cartridge
Capacity/unit (nominal) (megabytes)		0.5	0.25	2.5 Fixed 2.5 Removable	5 Fixed 5 Removable
Units/system		6	4	4	4
Total capacity (nominal) (megabytes)		3	1	20	40
Speed (rpm)		360	360	2400	2400
Rotational latency in milliseconds	average	83.3	83.3	12.5	12.5
	maximum	166.7	166.7	25	25
Arm movement in milliseconds	minimum	10	10	10	10
	maximum	760	760	90	90
	average	380	380	50	50
Transfer rate (kilobytes/second)		56	28	267	267
Sector size (bytes)		256	128	256	256
Record size (bytes)		256–1024	128–512	256–1024	256–1024
Sectors/track		26	26	24	24

Magnetic Tape

	Phase Encoded (PE)	Phase Encoded Non-Return to Zero (NRZI)
Tape	9 track	9 track
Speed	25 ips	25 ips
Transfer Rate	40 KB	20 KB
Density	1600 bpi	800 bpi
Printers	**300 LPM**	**600 LPM**
Type	MATRIX	BAND
Speed		
48 char. set	N/A	700 LPM
64 char. set	300 LPM	600 LPM
Print Positions	132	132
Horizontal Spacing	10 chars/in.	10 chars/in.
Vertical Spacing	6 or 8 lines/in.	6 or 8 lines/in.
# of copies	original + five	original + five
Paper width	to 18¾ inc.	to 18¾ inc.

Card Reader

Type—80 column

Speed—300 or 600 CPM

Hopper capacity—1000 card—input and output

Card Punch

Type—80 column

Speed—75 to 160 CPM

Hopper Capacity—
input—700 cards
output—primary: 700 cards
secondary: 100 cards

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